Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	File Nos. 0006729503 *et al.*
Request of Progeny LMS, LLC for Waiver	)	
and Limited Extension of Time	)	WT Docket No. 12-202

PETITION FOR RECONSIDERATION

Progeny LMS, LLC ("Progeny"), by its attorneys, and pursuant to Section 1.106 of the Commission's rules, respectfully petitions for reconsideration of a very limited portion of the order issued by the Mobility Division of the Wireless Telecommunications Bureau ("Division") in the above-captioned proceeding.[1] Progeny requests that the Bureau reconsider its decision to refrain from granting a license renewal and extension of time for the buildout of Progeny's two A Block licenses in the Multilateration Location and Monitoring Service ("M-LMS").[2]

Progeny sought a license renewal and an extension of time for the buildout of 113 B Block licenses, 113 C Block licenses and 2 A Block licenses. In making this request, Progeny did not differentiate between these three groups of licenses, making the same showing and requesting similar relief for all three groups. In fact, as the Division acknowledges, Progeny sought significantly less relief for its two A Block licenses than it sought for many of its B and C Block licenses.[3] Nevertheless, although the Division appropriately granted license renewals and

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[1] *See* In the Matter of Request of Progeny LMS, LLC for Waiver and Limited Extension of Time, WT Docket No. 12-202, *Order*, DA 17-20 (Jan. 17, 2017) ("*Order*").

[2] *See id.*, ¶ 36 (declining to provide a license renewal and build out extension for Progeny's A Block licenses under call signs WPQQ203 (Minneapolis-St. Paul) and WPQQ254 (Sacramento).

[3] *See id.*, ¶ 36 n.156 (noting Progeny's A Block extension request of only until April 3, 2020).

buildout extensions for Progeny's B and C Block licenses, the Division declined to grant this same relief for Progeny's A Block licenses covering Minneapolis and Sacramento.

The Division was incorrect in concluding that a license renewal and buildout extension was not justified for Progeny's M-LMS licenses in Minneapolis and Sacramento. Further, the Division's decision to refrain from granting the requested relief will disserve the public interest by depriving two major communities of the substantial and acknowledged benefits that would result from the use of Progeny's location technology to provide highly accurate indoor location services to support E911 emergency services and Public Safety first responders.

I. THE GRANT OF A LICENSE RENEWAL AND BUILDOUT EXTENSION FOR PROGENY'S M-LMS LICENSES IN MINNEAPOLIS AND SACRAMENTO WILL GREATLY SERVE THE PUBLIC INTEREST

The Division's order clearly identifies the primary justification for the grant of a license renewal and buildout extension for Progeny's M-LMS licenses, explaining

> the record clearly demonstrates that Progeny's network holds the potential of offering significant public safety benefits through improved E911 indoor location accuracy and, through our conditional relief, we ensure that Progeny will have the opportunity to provide such service to wireless carriers in order for them to meet upcoming deadlines adopted in the *Indoor Location Accuracy Order.* [4]

This justification applies equally to all three blocks of Progeny's M-LMS licenses, especially its A Block licenses for the communities of Minneapolis and Sacramento. As the Commission has recognized, the wireless carriers will likely use multiple location technologies to satisfy the Commission's "ultimate objective" of ensuring that "all Americans using mobile

[4] *Id.*, ¶ 28 (*citing Wireless E911 Location Accuracy Order*, Fourth Report and Order, 30 FCC Rcd 1259 (2015)); *see also id.*, ¶ 1.

phones – whether calling from urban or rural areas, from indoors or outdoors – have technology that is capable of providing accurate location information in times of an emergency."[5]

For example, to satisfy the Commission's fifth year wireless location requirement, when wireless carriers must provide either a dispatchable address solution or an x/y-axis location of within 50 meters for 70 percent of all wireless 911 calls, the carriers will likely need Progeny's highly accurate location technology to provide greater indoor penetration in heavily urban areas, particularly in the top 25 Cellular Market Areas ("CMAs").[6] The Commission's new wireless location rules also require carriers to provide compliant vertical location information by the sixth year in the top 25 CMAs. Here again, the wireless carriers will likely need Progeny's indoor location technology (which is the only technology that has consistently demonstrated highly accurate vertical performance capabilities) to meet this requirement.

Minneapolis and Sacramento are both in the top 25 CMAs, Minneapolis being number 16 and Sacramento being number 24. As shown below, they both include urban centers with tall buildings, environments in which Progeny's indoor location technology excels above all others.

Minneapolis, Minnesota

Sacramento, California

[5] *Wireless E911 Location Accuracy Order*, ¶ 10.

[6] *See id.*, ¶ 6.

Given this fact, it was unreasonable and arbitrary for the Division to recognize the important public interest benefits that can be achieved by granting the relief needed to make Progeny's highly accurate indoor location service available in every other major city in the country, but withholding this same relief for Minneapolis and Sacramento.

As discussed in subsequent sections of this petition, Progeny is fully capable of making its wireless location service commercially available in Minneapolis and Sacramento using its A Block spectrum by its requested deadline of April 3, 2020, or by an earlier date if requested by the major wireless carriers. The Division has failed to identify any reason why Progeny could not achieve this buildout objective. Therefore, Progeny urges the Division to grant a license renewal and buildout extension for Progeny's M-LMS licenses in Minneapolis and Sacramento to ensure that the substantial public interest benefits of Progeny's indoor location service can be made available to support public safety in every major community in the United States.

II. THE DIVISION WAS INCORRECT IN CONCLUDING THAT PROGENY HAS FAILED TO JUSTIFY A LICENSE RENEWAL AND BUILDOUT EXTENSION FOR ITS M-LMS LICENSES IN MINNEAPOLIS AND SACRAMENTO

As discussed above, the Division clearly identified the substantial public interest benefits that would result from the grant of a license renewal and buildout extension for Progeny's M-LMS licenses. Nevertheless, the Division indicated that it was withholding a license renewal and buildout extension for Progeny's M-LMS licenses in Minneapolis and Sacramento because Progeny has "fail[ed] to demonstrate that provision of service is possible under an extended timeframe, or even that relief is needed to develop equipment for commercial operation on the A Block."[7] Progeny addresses each of these two claimed justifications in turn.

[7] *Id.*, ¶ 36.

A. Progeny Can Successfully Bring its Indoor Location Network into Commercial Operation in Minneapolis and Sacramento Prior to Progeny's Requested Buildout Deadline

In refraining from granting a license renewal and buildout extension for Progeny's M-LMS licenses in Minneapolis and Sacramento, the Division claimed that Progeny failed to demonstrate that it would be possible for Progeny to provide its indoor location service using its A Block licenses within the extension period requested by Progeny.[8] In making this statement, the Division appears to assume that Progeny's extensive development efforts for its indoor location technology are applicable only to its B and C Block spectrum, and not to its A Block spectrum. Nearly all of Progeny's development efforts, however, have furthered the capabilities of its indoor location technology in all three of its licensed spectrum bands.

Progeny's indoor location technology can operate in any portion of the 902-928 MHz band. For this reason, Progeny worked with the wireless industry within the framework of the 3rd Generation Partnership Project ("3GPP") to develop and adopt standards for Progeny's Terrestrial Beacon System ("TBS") technology that allow for its deployment in any frequency band, not just in the frequencies authorized by Progeny's B and C Block licenses. When deploying TBS technology, indoor location accuracy levels are largely a function of optimizing beacon placement and density, thus avoiding the need to use specific frequency segments and instead allowing specific deployment plans to achieve needed levels of accuracy consistent with the Commission's wireless indoor location requirements.[9]

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[8] *Id*.

[9] The open standards for Progeny's TBS technology are publicly available on the ATIS website. *See* www.atis.org**.**

Granted, Progeny has not yet completed all of the same development measures for its A Block licenses that it has for its other licenses.[10] Progeny delayed some measures for justifiable reasons that were explained to Division staff. Progeny was hoping to harmonize its M-LMS spectrum through secondary market transactions involving Minneapolis and Sacramento. To date, however, Progeny has been unable to complete these transactions, making it likely that Progeny will use its A Block licenses to provide location services in these major cities.

Progeny's decision to delay deploying A Block beacon transmitters in Minneapolis and Sacramento is fully consistent with Commission precedent. The Commission has repeatedly expressed an aversion to construction undertaken merely to satisfy milestones. The Commission has explicitly expressed its preference for licensees providing tailored, well-considered services "rather than focusing their resources on meeting population coverage criteria and channel usage requirements."[11] The Commission has therefore granted buildout extensions to relieve licensees from the construction of "stop-gap, legacy systems" intended solely to preserve licenses.[12] The Commission has also granted additional time to allow licensees to deploy advanced digital services using equipment that is not yet available, rather than deploying existing and arguably outdated analog facilities.[13] Progeny's decision to delay constructing its beacon network using A

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[10] *See Order*, ¶ 28.

[11] Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, *Memorandum Opinion and Order on Reconsideration*, 99-270, ¶ 16 (1999).

[12] *See* Consolidated Request of the WCS Coalition For Limited Waiver of Construction Deadline for 132 WCS Licenses, WT Docket No. 06-102, *Order*, 21 FCC Rcd 14134, 14140-41 (2006).

[13] *See* FCI 900, Inc. Expedited Request For 3-Year Extension of 900 MHz Band Construction Requirements and Petition for Declaratory Rulemaking, *Memorandum Opinion and Order*, 16 FCC Rcd 11072, 11075, 11076-77 (2001).

Block spectrum in Minneapolis and Sacramento is fully consistent with this longstanding Commission policy and should not be used as a basis for withholding a license renewal and buildout extension for Progeny's M-LMS authorizations in these communities.

Importantly, Progeny's decision to delay some of its development efforts in Minneapolis and Sacramento have in no way impaired Progeny's ability to begin providing indoor location services in these two cities within the timeframe required by the Commission's *Wireless E911 Location Accuracy Order*. As the Division acknowledges, Progeny requested a buildout extension of only until April 3, 2020 to bring its M-LMS network into commercial operation in Minneapolis and Sacramento, a far more aggressive deadline than what Progeny requested for less populous communities.[14]

Progeny must address two issues in order to bring its M-LMS network into commercial operation in Minneapolis and Sacramento: the modification and certification of its equipment for use in the A Block, and demonstrating to the Commission that its indoor location service can operate in the A Block without causing unacceptable levels of interference to Part 15 devices.[15]

Progeny will not face significant difficulty or delay in modifying its beacon transmitters to operate in the A Block. Progeny designed its beacon transmitters with major RF transmission components, including power amplifiers, that are designed to operate across the entire 902-928 MHz band (the M-LMS A Block spectrum as well as B and C Block spectrum). Because of the modular design of Progeny's beacons, the primary modification required for Progeny's beacons to operate in the A Block would be swapping out the cavity filter (optimized to ensure

[14] *See Order*, ¶ 36 n.156.

[15] *See* 47 C.F.R. § 90.353(d).

compliance with out of band emissions in B and C Block spectrum) with a comparable cavity filter optimized to reduce A Block out of band emissions.

With respect to mobile user handsets, such devices are already designed to receive signals in multiple spectrum bands, including cellular, Wi-Fi, Bluetooth, and GPS. Progeny's receiving equipment and chipsets, as well as chipsets of Progeny's commercial chipset manufacturing partners, are capable of operating across the 902-928 MHz band as well. Although the individual implementations of different handset manufacturers may differ (such as with respect to antenna sharing, filtering, etc.), the need to receive Progeny's A Block beacon signals should not preclude the widespread availability of mobile user handsets in Minneapolis and Sacramento.

With respect to the second issue, the technical analysis required for the Commission to grant authority for Progeny to begin commercial operations in the A Block should be minimal. The operational characteristics of Progeny's one-way beacon service are identical in the A Block as compared to the B and C Bocks. Further, the operational characteristics of the Part 15 devices that operate in the A Block portion of the 902-928 MHz band are indistinguishable from the operational characteristics of the Part 15 devices that operate in the B and C Blocks. In fact, many Part 15 devices operate in all three band segments using either spread spectrum frequency hopping or automatic channel selection technologies.

The operation of Progeny's M-LMS network in Minneapolis and Sacramento using A Block spectrum will therefore have no more impact on unlicensed devices in those communities than Progeny's operations using B and C Block spectrum in other communities. As the Commission appropriately concluded, unlicensed devices are able to avoid interference from Progeny's M-LMS network in the same manner they address interference from other Part 15 devices, by shifting frequencies or employing other methods that enable their continued

operations.[16] Therefore, the Commission should be able to conclude expeditiously without further field testing or technical analysis that Progeny's beacon technology can operate in the A Block without causing unacceptable levels of interference to Part 15 devices. Thus, Progeny fully anticipates that it can bring its network into commercial operation in Minneapolis and Sacramento using its A Block spectrum prior to its requested buildout deadline of April 3, 2020.

B. Progeny Will Require a Buildout Extension to Bring its Indoor Location Network into Commercial Operation in Minneapolis and Sacramento

The second reason identified by the Division for its decision to refrain from granting license renewals and a buildout extension for Progeny's M-LMS licenses in Minneapolis and Sacramento is because Progeny "fail[ed] to demonstrate . . . that relief is needed to develop equipment for commercial operation on the A Block."[17]

Granted, Progeny does not require additional time to develop equipment capable of operating on a commercial basis in Progeny's licensed A Block spectrum. The equipment has already been developed. Instead, as the Division acknowledges, a buildout extension is needed to "enable the NextNav equipment to remain an option for wireless carriers to improve location accuracy and satisfy the Commission's location accuracy rules identified as a critical public safety need."[18] In reaching this conclusion, the Division concluded that the grant of a buildout extension in this case "serves the public interest and will 'preserve the continued availability of

[16] *See* Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, *Order*, 28 FCC Rcd 8555, ¶¶ 24-28 (2013).

[17] *Id.*, ¶ 36.

[18] *Id.*, ¶ 30.

Progeny's service for E911 emergency response.'"[19] Further, the Division found that "the existence of competing technologies" such as Progeny's indoor location service "spurs innovation and provides choice to consumers, thereby furthering the public interest."[20]

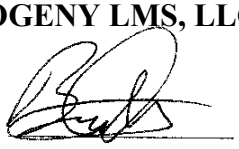
Each of these justifications apply equally to Progeny's A Block licenses in Minneapolis and Sacramento. Therefore, it was inappropriate and arbitrary to withhold a license renewal and a buildout extension for Progeny's A Block licenses in these populous communities.

III. CONCLUSION

Progeny urges the Division to reconsideration its decision and further the public interest by granting a license renewal and buildout extensions for Progeny's A Block M-LMS licenses in the cities of Minneapolis and Sacramento. Only through this action can the Commission ensure that public safety first responders in these cities have access to the same technological capabilities as in other urban centers to locate and assist people in times of emergency.

Respectfully submitted,

PROGENY LMS, LLC

By: 

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[19] *Id.* (*quoting* Progeny LMS, LLC Amendment and Restatement to Requests for Waiver and Extension of Time, WT Docket No. 12-202, at 20 (Mar. 27, 2015)).

[20] *Id.*

CERTIFICATE OF SERVICE

I, Bruce A. Olcott, hereby certify that on February 16, 2017, I caused a copy of the foregoing Petition for Reconsideration of Progeny LMS, LLC to be served by U.S. first-class mail, postage paid, upon each of the following:

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